

כל המספרים ממשיים. פתרו את מערכת המשוואות:

$$.3 \left\{ \begin{array}{l} x_1 + \frac{1}{x_2} = 1 \\ x_2 + \frac{1}{x_3} = 4 \\ x_3 + \frac{1}{x_4} = 1 \\ \vdots \\ x_{99} + \frac{1}{x_{100}} = 1 \\ x_{100} + \frac{1}{x_1} = 4 \end{array} \right. , \text{ כאשר } x_i > 0 \text{ לכל } i.$$

$$.2 \left\{ \begin{array}{l} (x_3 + x_4 + x_5)^2 = 3x_1 \\ (x_4 + x_5 + x_1)^2 = 3x_2 \\ (x_5 + x_1 + x_2)^2 = 3x_3 \\ (x_1 + x_2 + x_3)^2 = 3x_4 \\ (x_2 + x_3 + x_4)^2 = 3x_5 \end{array} \right.$$

$$.1 \left\{ \begin{array}{l} x_1 = 1 + \frac{6x_1^2}{x_1^2 + x_2^2 + \dots + x_{10}^2} \\ x_2 = 1 + \frac{6x_2^2}{x_1^2 + x_2^2 + \dots + x_{10}^2} \\ \dots \\ x_{10} = 1 + \frac{6x_{10}^2}{x_1^2 + x_2^2 + \dots + x_{10}^2} \end{array} \right.$$

$$.7 \left\{ \begin{array}{l} x^5 - 10 \cdot y^3 + 9 \cdot z = 0 \\ y^5 - 10 \cdot z^3 + 9 \cdot x = 0 \\ z^5 - 10 \cdot x^3 + 9 \cdot y = 0 \end{array} \right.$$

$$.6 \left\{ \begin{array}{l} xy + xz = 54 + x^2 \\ yx + yz = 64 + y^2 \\ zx + zy = 70 + z^2 \end{array} \right.$$

$$.5 \left\{ \begin{array}{l} a^3 + c^3 = 2 \\ a^2b + c^2d = 0 \\ b^3 + d^3 = 1 \\ ab^2 + cd^2 = -6 \end{array} \right.$$

$$.4 \left\{ \begin{array}{l} x + y + z = 0 \\ x^2 + y^2 + z^2 = x^3 + y^3 + z^3 \\ xyz = 2 \end{array} \right.$$

בתאבון!